Introduction to Computing-LAB

Lab 05	
Topic	**Variables Inputs, Selection Statements**
Objective	Learning how to use variables and selection statement (if, If-else,switch)

Task 1

Create a program to input the basic salary of an employee and calculate its Gross salary by using the if-else statement**.**

Write the program according to the following:

Basic Salary <= 10000: HRA = 20%, DA = 80%

Basic Salary <= 20000: HRA = 25%, DA = 90%

Basic Salary > 20000: HRA = 30%, DA = 95% **Hint: Gross salary = basic Salary + HRA + DA**

Dearness Allowance: is given out to employees to reduce the impact of inflation on employees.
House Rent Allowance (HRA): For most employees, House Rent Allowance (HRA) is a part of their salary structure.

Gross Salary: Gross Salary is the monthly or yearly salary before any deductions are made from it.

Output enter the basic salary of the employee. 25000 the gross salary of the employee is

56250

Task 2

Prompt the user to enter a roll number. If he/she enters an odd roll number Then print “Your group is alpha” else print “Your group is omega”

Task 3

Develop a C++ program that evaluates a student's grade based on their score.

Prompt the user to enter their exam score (assume it's out of 100).

Implement if-else statements to determine and display the corresponding grade.

Grading scale:

A: 90-100

B: 80-89 C:

70-79

D: 60-69

F: Below 60

Task 4

Write a C++ program to separate the 158 into the first, second, and third digits. **Output:**
1
5
8

Task 5

Serendipity Booksellers has a book club that awards points to its customers based on the number of books purchased each month. The points are awarded as follows:

- **If a customer purchases 0 books, he or she earns 0 points.**
- **If a customer purchases 1 book, he or she earns 5 points.**
- **If a customer purchases 2 books, he or she earns 15 points.**
- **If a customer purchases 3 books, he or she earns 30 points.**
- **If a customer purchases 4 or more books, he or she earns 60 points.**

Write a program that asks the user to enter the number of books that he or she has purchased this month and then displays the number of points awarded.

Task 6

Write a program that asks the user to enter a number within the range of 1 through 10. Display the Roman numeral version of that number.
Hint:
If user enter 4 , it display “IV”.

Task 7

The date June 10, 1960 is special because when we write it in the following format, the month times the day equals the year. 6/10/60

Write a program that asks the user to enter a month (in numeric form), a day, and a two-digit year. The program should then determine whether the month times the day is equal to the year.

If so, it should display a message saying "the date is magic". Otherwise it should display a message saying "the date is not magic".

Task 8

Write a program that asks the user to enter a number of seconds.

- There are 60 seconds in a minute. If the number of seconds entered by the user is greater than or equal to 60, the program should display the number of minutes in that many seconds.
- There are 3,600 seconds in an hour. If the number of seconds entered by the user is greater than or equal to 3,600, the program should display the number of hours in that many seconds.
- There are 86,400 seconds in a day. If the number of seconds entered by the user is greater than or equal to 86,400, the program should display the number of days in that many seconds

Task 9

The area of a rectangle is the rectangle's length times its width. Write a program that asks for the length and width of two rectangles.
The program should tell the user which rectangle has the greater area or if the areas are the same.